



2011 Annual Consumer Report on the Quality of Tap Water for Tobyhanna Army Depot

Public Water Supply Permit #2450053

Introduction

Last year, as in every year since 1997, your tap water met all U.S. Environmental Protection Agency (EPA) and state drinking water health standards.

Tobyhanna Army Depot (TYAD) vigilantly safeguards its water supplies and delivers tap water that is a clean, quality product. The water provided to customers meets or exceeds all federal and state standards for safe drinking water.

This brochure is a snapshot of last year's water quality. This is the 14th annual report on the quality of water delivered by TYAD.

Under the "Consumer Confidence Reporting Rule" of the Safe Drinking Water Act, starting in 1999, community water systems have been required to report their water quality information to their consumers.

**NOW IT COMES
WITH A LIST OF
INGREDIENTS.**



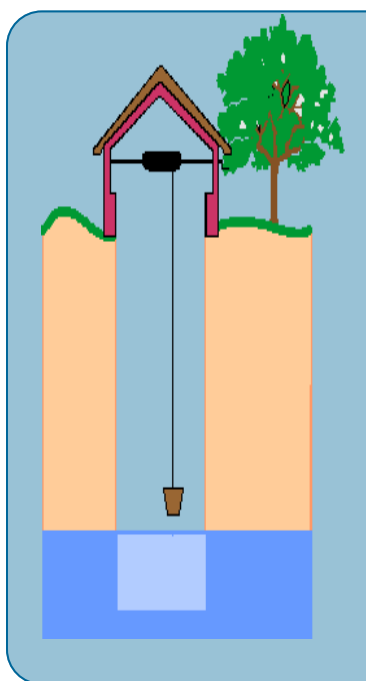
Contents Include:

- Monitoring of your drinking water.
- Definitions of key terms.
- Detected Contaminants List.
- Contact Information.
- Security Information.

Background

The sources of drinking water in the United States (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and can pick up substances resulting from the presence of animals or from human activity. Examples of what may be present in source water include: (A) Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife. (B) Inorganics, such as salts and metals, which can be naturally occurring or result from urban storm water runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming. (C) Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff and residential uses. (D) Organic chemicals, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban storm water runoff and septic systems. (E) Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the EPA prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Food and Drug Administration regulations establish limits for contaminants in bottled water, which must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some of these substances. Their presence does not necessarily indicate that the water poses a health risk. More information about their potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).



Background (cont)

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. TYAD is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your drinking water, you may wish to have your water tested. Information on lead in drinking water, testing methods and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons, such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/Centers for Disease Control and Prevention guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Your drinking water is pumped from groundwater sources via six deep wells located on TYAD. Well depths vary from 180 to 450 feet deep. One source well (Well #3) contains low levels of trichloroethylene (TCE), a chemical that was used as a cleaner or degreaser. Studies indicate the TCE entered the ground during construction of TYAD in the 1950s and then leached into the groundwater. The source of this contamination was successfully removed from the ground in the 1990s. This well is equipped with an air-stripping column, which removes the minute traces of TCE from the water. TYAD established a wellhead protection program in December 1996. Wellhead protection zones help assess any potential problems that may affect water supply and identify delineated areas to ensure that measures are being taken to reduce the potential for production wells to become contaminated. Each of these zones is inspected monthly. Pennsylvania state-certified operators at TYAD further ensure the quality of the water provided by managing the system seven days a week and providing on-the-spot operation and maintenance of all system components. A Source Water Assessment and Protection Plan has been developed jointly between TYAD and the Pennsylvania Department of Environmental Protection (PADEP). This plan is available to review by contacting the PADEP.

Monitoring Your Drinking Water

Our water system uses only EPA-approved laboratory methods to analyze your drinking water. Water samples are taken from the distribution system and taps by trained/certified personnel; samples are then taken to a state-accredited laboratory where a full spectrum of water quality analyses is performed. Our water system monitors for the substances listed in Column 1 of the following table using EPA-approved methods. Column 2 of the table specifies the monitoring frequency.

Analyte/Contaminant Group	Monitoring Frequency
Biological contaminants (total coliform group) ¹	Once per month (6 samples/month)
Lead and copper	20 Samples Every 3 Years
Inorganic contaminants (IOCs) ²	Once every 3 years
Unregulated contaminants ³	Once every 5 years
Volatile Organic Compounds (VOCs) ⁴	Once every 3 years

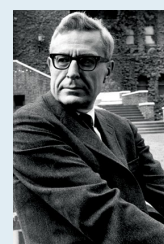
¹ Contaminants in this group include total coliform, fecal coliform and heterotrophic bacteria.

² Contaminants in this group include metals, nitrate, fluoride and asbestos.

³ Contaminants in this group include such compounds as chloroform, naphthalene and sulfate.

⁴ Contaminants in this group include such compounds as benzene, carbon tetrachloride and TCE.

"Wellhead protection zones help assess any potential problems that may affect water supply."



"If there is magic on this planet, it is contained in water."

- Loren Eiseley

Fuel and oil spills can adversely affect drinking water supplies, call 911 and report spills promptly.

To gain a better understanding of the content of this report, several key terms must be defined.

Maximum Contaminant Level Goal (MCLG) - The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) - The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology. As required by EPA, our water system analyzes for contaminants (including lead and copper), which are governed by action levels, and not MCLs. Additionally, our water system analyzes for contaminants which are subject to treatment techniques.

Action Level (AL) - The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Additional Acronyms/Terms Used In This Report

Below is a listing of acronyms and terms (with explanations) used in this Consumer Confidence Report.

- **ppm** = Parts per million; a unit of measure equivalent to a single penny in \$10,000.
- **ppb** = Parts per billion; a unit of measure equivalent to a single penny in \$10,000,000.
- **ug/L** = Micrograms per liter; a unit of measure equivalent to part per billion (ppb).
- **mg/L** = Milligrams per liter; a unit of measure equivalent to part per million (ppm).
- **CCR** = Consumer Confidence Report.
- **SDWA** = Safe Drinking Water Act; federal law which sets forth drinking water regulations.
- **Level Found** = Laboratory analytical result for a contaminant; this value is evaluated against an AL or MCL to determine compliance.
- **Range** = The range of the highest and lowest analytical values of a reported contaminant. For example, the range of reported analytical detections for an unregulated contaminant may be 10.1 ppm (lowest value) to 13.4 ppm (highest value). EPA requires this range to be reported for certain analytes.



Results Table. Detected Contaminants

The following table presents the analytical results of our monitoring for the reporting period of 2011. The sample results for this year will be presented in next year's 2012 CCR.

Contaminant	MCLG (Ideal Goals)	MCL (Highest Level Allowed)	Highest Level Detected	Units of Measure	Range of Detection	Exceeded Standard	Likely Source of Contaminant
Nitrate	10	10	2.60	ppm	N/A	No	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits.
Copper	0	AL = 1.3	0.308*	ppm	0.039 – 0.337	No	Corrosion of household plumbing systems; Erosion of natural deposits.
Chlorine	4	4	1.63	ppm	0.09 – 1.63	No	Water additive used to control microbes.
Trihalomethanes	0	60	5.1	ppb	5.1 – 5.1	No	By-product of disinfectant addition.

* This value represents the 90th percentile value of the most recent round of sampling. 0/20 copper samples exceeded the action level.

Violations and Exceedances

Contaminant	MCLG (Ideal Goals)	MCL (Highest Level Allowed)	Highest Level Detected	Units of Measure	Range of Detection	Exceeded Standard	Likely Source of Contaminant
Fecal coliform/E. coli—in the distribution system (positive samples)	0	0	3	N/A	N/A	Yes	Human and animal fecal waste.

* A violation occurs when a routine sample, in any given month, are total coliform positive, and one is also fecal coliform or E. coli positive.

Fecal coliform/E. coli - in the distribution system

Fecal coliform and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause short-term effects, such as diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems. Surveillance sampling is conducted every two weeks, at three sites, for total coliform bacteria.



* Water quality monitoring panel on Powder Smoke Ridge monitors all waters entering the distribution system.

The surveillance samples collected on January 5, 2011 showed positive for E. coli bacteria despite the fact the proper disinfection of the water system was being performed. From January 7 to January 11, 2011 a total of 17 samples were collected and analyzed for bacteria, every sample came back negative. While the exact cause of the original contamination cannot be determined, we are confident the health of our workforce and residents was never in danger.

In May 2011, an additional water quality monitoring panel was installed on the water distribution system to monitor residual chlorine levels 24 hours per day, 7 days per week.

Detected Contaminants

The "Likely Source of Contaminant" listed in the tables on page three and four simply shows potential sources of the substance. This does not necessarily represent why it was detected in the TYAD water system. We constantly monitor the water supply to meet all regulatory requirements. The table lists only those contaminants that had some level of detection. Samples were taken for many other parameters and were not detected.



Cross Connection Control

A cross connection is an unprotected or improper connection to a public water distribution system that may cause contamination or pollution to enter the system. Cross connections can include anything from

a hose connection to a hydrant to a large piece of industrial equipment. Many can be protected using a simple backflow prevention device (as pictured above). Over 200 of these devices are installed and monitored around TYAD.

Drinking Water Security

Report Suspicious Activity

*...watch out!
...help out!
...report it!*

FOR EMERGENCIES: Call 911

FOR MORE INFORMATION: Call The Environmental Management Division at X57098.



Army Selects TYAD as One of Six Net Zero Water Pilot Installations

An Army Net Zero Water Installation limits the consumption of freshwater resources and returns water back to the same watershed so not to deplete the groundwater and surface water resources of that region in quantity and quality over the course of a year. The net zero water strategy balances water availability and use to ensure sustainable water supply for years to come. This concept is of increasing importance since scarcity of clean potable water is quickly becoming a serious issue in many countries around the world. The continued draw-down of major aquifers results in significant problems for our future. Strategies such as harvesting rain water and recycling discharge water for reuse can reduce the need for municipal water, exported sewage or storm water.

To achieve net zero water status, efforts begin with conservation followed by efficiency in use and improved integrity of distribution systems. Water is repurposed by utilizing grey water generated from sources such as showers, sinks and laundries and by capturing precipitation and storm water runoff for on-site use. Wastewater can be treated and reclaimed for other uses or recharged into groundwater aquifers.

Help Save Water



- Water is vital to our community and to accomplishing our missions - report all water leaks promptly to the work order desk, X57805.
- A savings of only 1,000 gallons of water per day can save taxpayers over \$3,000 per year.

Did you know that the average U.S. household uses approximately 400 gallons of water per day or 100 gallons per person per day? Luckily, there are many low-cost and no-cost ways to conserve water. Small changes can make a big difference.

- Take short showers - a five minute shower uses four to five gallons of water compared to up to 50 gallons for a bath.
- Shut off water while brushing your teeth, washing your hair and shaving and save up to 500 gallons per month.
- Run your clothes washer and dishwasher only when they are full. You can save up to 1000 gallons per month.
- Water plants only when necessary.
- Adjust sprinklers so only your lawn is watered. Apply water only as fast as the soil can absorb it and during the cooler parts of the day to reduce evaporation.
- Visit www.epa.gov/watersense for more information.



Public Involvement



This Consumer Confidence Report was prepared by Mr. Thomas J. Wildoner, Jr. of the Environmental Management Division in coordination with Mr. Nathan Edwards, Chief, Environmental Management Division, D\Industrial Risk Management. For additional information regarding this report, please contact Mr. Wildoner at (570) 615-6498, or via e-mail at thomas.wildoner@us.army.mil. We welcome public comments and participation.